

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.

WEST Search History

Hide Items

Restore

Clear

Cancel

DATE: Saturday, July 10, 2004

Hide?	Set Name	Query	Hit Count
		<i>DB=USPT; PLUR=YES; OP=ADJ</i>	
<input type="checkbox"/>	L14	l13 and(DOM or data object model)	14
<input type="checkbox"/>	L13	L12 and XML	89
<input type="checkbox"/>	L12	updat\$ near3 document	1217
<input type="checkbox"/>	L11	L9 and XML	0
<input type="checkbox"/>	L10	L9 and XML and (DOM or data object model)	0
<input type="checkbox"/>	L9	updat\$ near3 document near5 remot\$	21
<input type="checkbox"/>	L8	xml and dom and (updat\$ or synchroniz\$) and event	76
<input type="checkbox"/>	L7	(xml and dom).ab.	9
<input type="checkbox"/>	L6	6635089.pn.	1
<input type="checkbox"/>	L5	6578000.pn.	1
<input type="checkbox"/>	L4	6404445.pn.	1
<input type="checkbox"/>	L3	l1 and event	81
<input type="checkbox"/>	L2	L1 and (event near3 table)	2
<input type="checkbox"/>	L1	xml and (document object model or DOM) and (add\$ or delet\$ or modify\$) and updat\$	122

END OF SEARCH HISTORY

(FILE 'HOME' ENTERED AT 16:27:07 ON 10 JUL 2004)

FILE 'INSPEC, COMPENDEX' ENTERED AT 16:27:15 ON 10 JUL 2004

L1	154 S XML AND DOM
L2	5 S L1 AND UPDAT?
L3	0 S L1 AND SYNCHRONIZ?
L4	5 S L1 AND EVENT
L5	5 S L1 AND REMOT?
L6	87 S UPDAT? AND DOCUMENT AND XML
L7	5 S L6 AND NODE?
L8	5 S L6 AND DOCUMENT OBJECT MODEL

=>

Welcome to STN International! Enter x:x
LOGINID:ssspta2309sxs
PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):3

***** Welcome to STN International *****

NEWS 1 Web Page URLs for STN Seminar Schedule - N. America
NEWS 2 "Ask CAS" for self-help around the clock
NEWS 3 May 12 EXTEND option available in structure searching
NEWS 4 May 12 Polymer links for the POLYLINK command completed in REGISTRY
NEWS 5 May 27 New UPM (Update Code Maximum) field for more efficient patent
SDIs in CAlus
NEWS 6 May 27 CAlus super roles and document types searchable in REGISTRY
NEWS 7 Jun 22 STN Patent Forums to be held July 19-22, 2004
NEWS 8 Jun 28 Additional enzyme-catalyzed reactions added to CASREACT
NEWS 9 Jun 28 ANTE, AQUALINE, BIOENG, CIVILENG, ENVIROENG, MECHENG,
and WATER from CSA now available on STN(R)

NEWS EXPRESS MARCH 31 CURRENT WINDOWS VERSION IS V7.00A, CURRENT
MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 26 APRIL 2004
NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that
specific topic.

All use of STN is subject to the provisions of the STN Customer
agreement. Please note that this agreement limits use to scientific
research. Use for software development or design or implementation
of commercial gateways or other similar uses is prohibited and may
result in loss of user privileges and other penalties.

***** STN Columbus *****

FILE 'HOME' ENTERED AT 16:27:07 ON 10 JUL 2004

=> file inspec, compendex

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'INSPEC' ENTERED AT 16:27:15 ON 10 JUL 2004

Compiled and produced by the IEE in association with FIZ KARLSRUHE
COPYRIGHT 2004 (c) INSTITUTION OF ELECTRICAL ENGINEERS (IEE)

FILE 'COMPENDEX' ENTERED AT 16:27:15 ON 10 JUL 2004

Compendex Compilation and Indexing (C) 2004

Elsevier Engineering Information Inc (EEI). All rights reserved.

Compendex (R) is a registered Trademark of Elsevier Engineering Information Inc.

=> s xml and dom

L1 154 XML AND DOM

=> s l1 and (updat? or synchroniz?)

(UPDAT? IS NOT A RECOGNIZED COMMAND

The previous command name entered was not recognized by the system.

For a list of commands available to you in the current file, enter

"HELP COMMANDS" at an arrow prompt (=>).

=> s l1 and updat?

L2 5 L1 AND UPDAT?

=> d 1-5 ti

L2 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN

TI Interworking of distributed object systems using a SOAP bridge.

L2 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN

TI A system based on **XML** for supporting the management of educational Web sites.

L2 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN

TI Pushing reactive services to **XML** repositories using active rules.

L2 ANSWER 4 OF 5 INSPEC (C) 2004 IEE on STN

TI The Web document API.

L2 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN

TI Pushing reactive services to **XML** repositories using active rules.

=> d ab 3, 4

L2 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN

AB Push technology, i.e., the ability of sending relevant information to clients in reaction to new events, is a fundamental aspect of modern information systems; **XML** is rapidly emerging as the widely adopted standard for information exchange and representation and hence, several **XML**-based protocols have been defined and are the object of investigation at W3C and throughout commercial organizations. In this paper, we propose the new concept of active **XML** rules for "pushing" reactive services to **XML**-enabled repositories. Rules operate on **XML** documents and deliver information to interested remote users in reaction to **update** events occurring at the repository site. The proposed mechanism assumes the availability of **XML** repositories supporting a standard **XML** query language, such as XQuery that is being developed by the W3C; for the implementation of the reactive components; it capitalizes on the use of standard **DOM** events and of the SOAP interchange standard to enable the remote installation of active rules. A simple protocol is proposed for subscribing and unsubscribing remote rules.

L2 ANSWER 4 OF 5 INSPEC (C) 2004 IEE on STN

AB "The Document Object Model is a platform- and language-neutral interface that will allow programs and scripts to dynamically access and **update** the content, structure and style of HTML and **XML** documents. The document can be further processed and the results of that processing can be incorporated back into the presented page." This sentence is taken from the pages at the W3C (World-Wide Web Consortium) site that discuss the work being done by the **DOM** (Document Object Model) Working Group. This group is working hard to standardize the various ways of accessing HTML (Hypertext Markup Language) and **XML** (Extensible Markup Language) documents that exist from JavaScript and applets to the various vendor-dependent command language interfaces. The group consists of representatives from many of the companies one would expect, from both the HTML and SGML/**XML** communities. This paper presents an overview of the current specifications, what has been done, and what yet remains to be specified.

=> d all 3

L2 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
 AN 2002:7362922 INSPEC DN C2002-10-6130D-015
 TI Pushing reactive services to **XML** repositories using active rules.
 AU Bonifati, A.; Ceri, S.; Paraboschi, S. (Dipt. di Elettronica e Inf., Politecnico di Milano, Italy)
 SO Computer Networks (5 Aug. 2002) vol.39, no.5, p.645-60. 50 refs.
 Doc. No.: S1389-1286(02)00226-8
 Published by: Elsevier
 Price: CCCC 1389-1286/02/\$22.00
 CODEN: CNETDP ISSN: 1389-1286
 SICI: 1389-1286(20020805)39:5L:645:PRSR;1-X
 DT Journal
 TC Practical
 CY Netherlands
 LA English
 AB Push technology, i.e., the ability of sending relevant information to clients in reaction to new events, is a fundamental aspect of modern information systems; **XML** is rapidly emerging as the widely adopted standard for information exchange and representation and hence, several **XML**-based protocols have been defined and are the object of investigation at W3C and throughout commercial organizations. In this paper, we propose the new concept of active **XML** rules for "pushing" reactive services to **XML**-enabled repositories. Rules operate on **XML** documents and deliver information to interested remote users in reaction to **update** events occurring at the repository site. The proposed mechanism assumes the availability of **XML** repositories supporting a standard **XML** query language, such as XQuery that is being developed by the W3C; for the implementation of the reactive components; it capitalizes on the use of standard **DOM** events and of the SOAP interchange standard to enable the remote installation of active rules. A simple protocol is proposed for subscribing and unsubscribing remote rules.
 CC C6130D Document processing techniques; C6130M Multimedia; C5640 Protocols; C7210N Information networks; C6150N Distributed systems software; C6110J Object-oriented programming
 CT CLIENT-SERVER SYSTEMS; DISTRIBUTED OBJECT MANAGEMENT; DOCUMENT DELIVERY; ELECTRONIC DATA INTERCHANGE; HYPERMEDIA MARKUP LANGUAGES; INFORMATION RESOURCES; INSTALLATION; PROTOCOLS; QUERY LANGUAGES
 ST reactive services; **XML** repositories; active rules; push technology; clients; protocols; W3C; **update** events; information delivery; query language; XQuery; **DOM** events; SOAP interchange standard; remote installation; subscribing; unsubscribing; document management; WWW

=> d all 4

L2 ANSWER 4 OF 5 INSPEC (C) 2004 IEE on STN
 AN 1999:6294174 INSPEC DN C1999-08-6130D-021
 TI The Web document API.
 AU Wood, L. (SoftQuad Inc., Surrey, BC, Canada)
 SO Proceedings of SGML/XML Europe '98. From Theory to New Practices
 Alexandria, VA, USA: Graphic Communications Association, 1998. p.95-9 of ix+651 pp. 2 refs.
 Conference: Paris, France, 17-21 May 1998
 DT Conference Article
 TC General Review
 CY United States
 LA English
 AB "The Document Object Model is a platform- and language-neutral interface that will allow programs and scripts to dynamically access and **update** the content, structure and style of HTML and **XML**

documents. The document can be further processed and the results of that processing can be incorporated back into the presented page." This sentence is taken from the pages at the W3C (World-Wide Web Consortium) site that discuss the work being done by the DOM (Document Object Model) Working Group. This group is working hard to standardize the various ways of accessing HTML (Hypertext Markup Language) and XML (Extensible Markup Language) documents that exist from JavaScript and applets to the various vendor-dependent command language interfaces. The group consists of representatives from many of the companies one would expect, from both the HTML and SGML/XML communities. This paper presents an overview of the current specifications, what has been done, and what yet remains to be specified.

CC C6130D Document processing techniques; C7210N Information networks; C6140D High level languages; C6110J Object-oriented programming
CT APPLICATION PROGRAM INTERFACES; FORMAL SPECIFICATION; HYPERMEDIA MARKUP LANGUAGES; INFORMATION RESOURCES; JAVA; OBJECT-ORIENTED PROGRAMMING; STANDARDISATION
ST Web document; API; Document Object Model; HTML; XML documents; W3C; World-Wide Web Consortium; DOM Working Group; standardization; Hypertext Markup Language; Extensible Markup Language; JavaScript; applets; command language interfaces; specifications

=> d his

(FILE 'HOME' ENTERED AT 16:27:07 ON 10 JUL 2004)

FILE 'INSPEC, COMPENDEX' ENTERED AT 16:27:15 ON 10 JUL 2004

L1 154 S XML AND DOM
L2 5 S L1 AND UPDAT?

=> s l1 and synchroniz?

L3 0 L1 AND SYNCHRONIZ?

=> s l1 and event

L4 5 L1 AND EVENT

=> d 1-5 ti

L4 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN
TI XML parser usability and performance.

L4 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
TI Combining STL with SAX and XPath for effective XML parsing.

L4 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
TI Exploring SAX2.

L4 ANSWER 4 OF 5 INSPEC (C) 2004 IEE on STN
TI The joy of SAX [data manipulation].

L4 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
TI An XML-based language for the research & development pipeline management problem.

=> s l1 and remot?

L5 5 L1 AND REMOT?

=> d 1-5 ti

L5 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN
TI Interaction translation methods for XML/SNMP gateway.

L5 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
 TI Pushing reactive services to **XML** repositories using active rules.

L5 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
 TI Millau: an encoding format for efficient representation and exchange of **XML** over the Web.

L5 ANSWER 4 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
 TI Pushing reactive services to **XML** repositories using active rules.

L5 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
 TI Millau: an encoding format for efficient representation and exchange of **XML** over the Web.

=> d ab 3

L5 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
 AB **XML** is poised to take the World Wide Web to the next level of innovation. **XML** data, large or small, with or without associated schema, will be exchanged between increasing number of applications running on diverse devices. Efficient storage and transportation of such data is an important issue. We have designed a system called Millau for efficient encoding and streaming of **XML** structures. We describe the Millau algorithms for compression of **XML** structures and data. Millau compression algorithms, in addition to separating structure and text for compression, take advantage of the associated schema (if available) in compressing the structure. Millau also defines a programming model corresponding to **XML DOM** and **SAX** for **XML** APIs for Millau streams of **XML** documents. Our experiments have shown significant performance gains of our algorithms and APIs. We describe some of these results. We also describe some applications of **XML**-based **remote** procedure calls and client-server applications based on Millau that take advantage of the compression and streaming technology defined by the system.

=> d his

(FILE 'HOME' ENTERED AT 16:27:07 ON 10 JUL 2004)

FILE 'INSPEC, COMPENDEX' ENTERED AT 16:27:15 ON 10 JUL 2004

L1 154 S XML AND DOM
 L2 5 S L1 AND UPDAT?
 L3 0 S L1 AND SYNCHRONIZ?
 L4 5 S L1 AND EVENT
 L5 5 S L1 AND REMOT?

=> s updat? and document and xml

L6 87 UPDAT? AND DOCUMENT AND XML

=> s l6 and node?

L7 5 L6 AND NODE?

=> d 1-5 ti

L7 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN
 TI An index structure of semi-structured data set for similarity search.

L7 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
 TI MPEG-7 binary format for **XML** data.

L7 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
TI Efficient complex query support for multiversion **XML** documents.

L7 ANSWER 4 OF 5 INSPEC (C) 2004 IEE on STN
TI WebFilter: a high-throughput **XML**-based publish and subscribe system.

L7 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
TI **XML** Content **Update** Using Relative Region Coordinates.

=> d ab 5

L7 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
AB Among several methods of storing **XML** documents, a straightforward yet efficient method is to store a string representation of the **XML** document. An **XML** node is usually represented by a region coordinate, which is a pair of integers expressing the start and end positions of the substring corresponding to the node. This approach, however, has the drawback that a change of a node's region coordinate causes change of the region coordinates of many other elements. This recomputation normally degrades the performance of **XML** applications, especially when content is **updated** frequently. In this paper, we propose the Relative Region Coordinate (RRC) technique to effectively reduce the cost of recomputation. The main idea is to express the coordinate of an **XML** element in the region of its parent element. We present a method to integrate the RRC information into **XML** systems and provide experimental results that demonstrate the effectiveness of the RRC in the content **update**. 24 Refs.

=> s 16 and document object model
L8 5 L6 AND DOCUMENT OBJECT MODEL

=> d 1-5 ti

L8 ANSWER 1 OF 5 INSPEC (C) 2004 IEE on STN
TI Automatic form generation.

L8 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
TI XMILE: an **XML** based approach for incremental code mobility and **update**.

L8 ANSWER 3 OF 5 INSPEC (C) 2004 IEE on STN
TI The Web **document** API.

L8 ANSWER 4 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
TI Automatic form generation.

L8 ANSWER 5 OF 5 COMPENDEX COPYRIGHT 2004 EEI on STN
TI XMILE: An **XML** based approach for incremental code mobility and **update**.

=> d ab 2

L8 ANSWER 2 OF 5 INSPEC (C) 2004 IEE on STN
AB The eXtensible Markup Language (**XML**) was originally defined to represent Web content, but it is being increasingly used to define languages, such as XPL, that are used for coding executable algorithms, policies or scripts. **XML**-related standards, such as XPath and the **Document Object Model**, permit the flexible manipulation of fragments of **XML** code, which enables

novel code migration and **update** paradigms. The XMILE approach that we describe in this paper exploits these mechanisms in order to achieve flexible and fine-grained code **updates**, even without stopping execution. We describe a Java-based prototype that implements XMILE and our experience in using XMILE in the domain of code **updates** on mobile devices.

=> d his

(FILE 'HOME' ENTERED AT 16:27:07 ON 10 JUL 2004)

FILE 'INSPEC, COMPENDEX' ENTERED AT 16:27:15 ON 10 JUL 2004

L1	154 S XML AND DOM
L2	5 S L1 AND UPDAT?
L3	0 S L1 AND SYNCHRONIZ?
L4	5 S L1 AND EVENT
L5	5 S L1 AND REMOT?
L6	87 S UPDAT? AND DOCUMENT AND XML
L7	5 S L6 AND NODE?
L8	5 S L6 AND DOCUMENT OBJECT MODEL

=>